CONSTITUTIVE EXPRESSION AND FUNCTIONALITY OF THE GENE *JEN1* OF *SACCHAROMYCES CEREVISIAE* IN THE PRESENCE OF GLUCOSE

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The product of the gene *JEN1* is a plasma membrane permease for lactate, acetate, propionate and pyruvate in *S. cerevisiae* that is absent in glucose grown cells (Casal *et al*., 1999. J. Bacteriol. 181: 2620-2623). The aim of the present work was to study the expression and functionality of *JEN1* in the presence of glucose. The entire ORF was cloned by PCR into the centromeric plasmid p416GPD, under the control of the constitutive promotor derived from the gene encoding glyceraldehyde-3-phosphate dehydrogenase. The recipient strain used in the present work was W303-1A *jen1Δ*: strain L23 contains *JEN1* under the control of the above mentioned promotor, and strain L19 contains the empty plasmid. In cells of the strain L23, grown in YNB with glucose (2%, w/v) pH 4.0, the expression of *JEN1* was confirmed by RT-PCR. Activity for the monocarboxylate permease, measured with ^{14}[C]-lactic acid at pH 5.0 was also present, therefore indicating that the carrier is operational. In cells of strain L19, neither *JEN1* mRNA nor transport activity was found under the above described conditions. Both strains had identical growth parameters in all the conditions tested, and showed similar substrate consumption patterns. In the present work it was verified that, in the presence of glucose, the main catabolic repressor of the monocarboxylate permease, the constitutive expression of *JEN1* can restore the transport activity.